



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,132	08/31/2001	Peter F. King	3399P056	3012
26529	7590	11/12/2004		
BLAKELY SOKOLOFF TAYLOR & ZAFMAN/PDC 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025			EXAMINER SCUDERI, PHILIP S	
			ART UNIT 2153	PAPER NUMBER

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/945,132

Applicant(s)

KING ET AL.

Examiner

Philip S. Scuderi

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-7, 20-27, 36-41, and 43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-19, 28-35, and 42 is/are rejected.
- 7) ☒ Claim(s) 8, 11, 28-33, and 42 is/are objected to.
- 8) ☒ Claim(s) 8-19, 28-35, and 42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, 20-27, 36-41, and 43, drawn to determining a client ID and to assigning an agent, classified in class 709, subclass 220.
 - II. Claims 8-19, 28-35, and 42, drawn to balancing a data load on a network, classified in class 709, subclass 226.

The inventions are distinct, each from the other because:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as determining a client ID in order to authenticate a user on a secure network or assigning an agent in order to keep a session alive. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. A telephone call was made to Jordan Becker on October 13, 2004 to request an election to the above restriction requirement. Mr. Becker elected, via email, group II – claims 8, 28, and 24 with traverse.

Drawings

Art Unit: 2153

5. Figures 1, 2, 3, 5, 6, 7, 7A, 7B, and 7D should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 302. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 110, 206, and 730. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

8. The disclosure is objected to because of the following informalities:
- On ¶ 0032 line 3 "User terminal 400" is misnumbered. Examiner suggests "User terminal 401." Appropriate correction is required.
 - On ¶ 0071 line 6 the phrase "to the to the FEP source port" is improper English. Examiner suggests, "to the FEP source port."
 - ¶ 0077 references Figure 8, which is not included with the application. Appropriate correction is required.

Art Unit: 2153

- In ¶ 0079 applicant suggests that one of skill in the art will immediately recognize that the term “computer-readable medium/media” further encompasses a carrier wave that encodes a data signal. The USPTO no longer considers a carrier wave a tangible medium.

9. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

10. The following title is suggested: Method, System, and Means for Performing Load Balancing on a Computer Network Supporting the WAP Protocol by Forwarding Requests to Agents Associated with Addresses and Ports and Hiding Client and Server IP Addresses and Ports from Each Other.

Claim Objections

11. Claim 8 is objected to because of the following informalities: on line 6 “an front-end processor.” Examiner suggests “a front-end processor.” Appropriate correction is required.

12. Claim 11 is objected to because of the following informalities: on line 3 “a abbreviated WTLS handshake.” Examiner suggests “an abbreviated WTLS handshake.” Appropriate correction is required.

13. Claim 28 is objected to because of the following informalities: on line 13 "an front-end processor source port." Examiner suggests "a front-end processor source port."

Appropriate correction is required.

14. Claims 29 and 30 are objected to because of the following informalities: on lines 1-2 "the determine a first source address and a first source port from the request."

Examiner suggests, "determining a first source address and a first source port from the request." Appropriate correction is required.

15. Claim 30 is objected to because it is identical to claim 29.

16. Claim 31 is objected to because of the following informalities: "the remap the first source address of the request to a front-end processor source address." Examiner suggests, "remapping the first source address of the request to a front-end processor source address." Appropriate correction is required.

17. Claim 32 objected to because of the following informalities: on lines 1-2 "the storage facility coupled to the processor and further contains." Examiner suggests, "the storage facility coupled to the processor further contains." Appropriate correction is required.

18. Claim 33 is objected to because of the following informalities: on lines 1-2 "the remap the first source address of the request to a front-end processor source address." Examiner suggests, "remapping the first source address of the request to a front-end processor source address." Appropriate correction is required.

19. Claim 42 is objected to because of the following informalities: on lines 7-8 "an front-end processor source port." Examiner suggests "a front-end processor source port." Appropriate correction is required.

Claim Rejections - 35 USC § 112

20. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

21. Claim 11 recites the limitation "the client ID" in line 5. There is insufficient antecedent basis for this limitation in the claim.

22. Claim 12 recites the limitation "the client ID" in line 5. There is insufficient antecedent basis for this limitation in the claim.

23. Claim 16 recites the limitation "the origin server response source address" in line 5. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "a source address of the origin server."

24. Claim 16 recites the limitation "the origin server response source port" in line 7. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "a source port of the origin server."
25. Claim 17 recites the limitation "the selected agent source port" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "a source port of the selected agent."
26. Claims 28 and 32 recite the limitation "the processing system" on lines 7 and 2-3 respectively. There is insufficient antecedent basis for these limitations in the claims.
27. Claim 32 recites the limitation "the origin server response" in line 7. There is insufficient antecedent basis for this limitation in the claim.
28. Claim 32 recites the limitation "the front-end processor source address" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "a source address of the front-end processor."
29. Claim 33 recites the limitation "the selected agent source port" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "a source port of the selected agent."

Claim Rejections - 35 USC § 102

30. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

31. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

32. Claims 8, 13, 28, 31, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Cohen et al. (U.S. 6,389,462) hereinafter referred to as Cohen.

33. With respect to claims 8 and 42, Cohen teaches (claim 8) a method of balancing a data load on a network comprising and (claim 42) a system for balancing a data load on a network comprising a means for:

- receiving a request from a client (col. 8 lines 16-17, col. 9 lines 19-22);
- determining a first source address and a first source port from the request (col. 8 lines 31-40);

Art Unit: 2153

- remapping the first source address of the request to a front-end processor source address (col. 8 lines 31-33);
- remapping the first source port of the request to an front-end processor source port (col. 8 lines 34-40); and
- sending the remapped request to an origin server (col. 8 lines 53-56).

34. With respect to claim 13, Cohen teaches the method of claim 8 as discussed above wherein remapping the first source address of the request to a front-end processor source address includes:

- storing the first source address and the corresponding front-end processor source address (col. 8 lines 33-45, col. 8 line 67-col. 9 line 3); and
- storing the first source port and the corresponding front-end processor source port (col. 8 lines 33-45, col. 8 line 67-col. 9 line 3).

35. With respect to claim 28, Cohen teaches a system for balancing data load on a network comprising:

- a processor (col. 17 lines 36-41, fig. 1 (104));
- a network coupled to the processor (fig. 1 (102, 105, 111));
- a front-end processor coupled to the network (col. 17 lines 36-41, fig. 1 (104));
- a client coupled to the network (fig. 1 (101)); and
- a storage facility coupled to the processor (col. 7 lines 49-52, col. 17 lines 36-41) and containing instructions executable by the processor which configure the processing system to:
 - receiving a request from a client (col. 8 lines 16-17, col. 9 lines 19-22);

- determining a first source address and a first source port from the request (col. 8 lines 31-40);
- remapping the first source address of the request to a front-end processor source address (col. 8 lines 31-33);
- remapping the first source port of the request to an front-end processor source port (col. 8 lines 34-40); and
- sending the remapped request to an origin server (col. 8 lines 49-56).

36. With respect to claim 31, Cohen teaches the system of claim 28 as discussed above wherein the remap the first source address of the request to a front-end processor source address includes:

- storing the first source address and the corresponding front-end processor source address (col. 8 lines 33-45, col. 8 line 67-col. 9 line 3); and
- storing the first source port and the corresponding front-end processor source port (col. 8 lines 33-45, col. 8 line 67-col. 9 line 3).

Claim Rejections - 35 USC § 103

37. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

38. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 2153

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

39. Claims 16 and 32 are rejected under 35 U.S.C. 103(a) as being obvious over Cohen in view of Foti (U.S. Pub. 2002/0194378) hereinafter referred to as Foti. Cohen teaches the method of balancing a data load on a network as applied to claim 8 above and the system for balancing a data load on a network as applied to claim 28 above. Cohen discloses said method of balancing a data load on a network and said system for balancing a data load on a network, further comprising:

- receiving a response from the origin server, wherein the response is responding to the remapped request and wherein the response is received in the front-end processor (col. 8 lines 37-40); and
- sending the response to the client (col. 8 lines 56-58).

Cohen does not disclose expressly said method of balancing a data load on a network further comprising, or said system for balancing a data load on a network wherein the storage facility contains instructions executable by the processor which configure the processing system to:

- remapping the origin server response source address to the front-end processor source address;
- remapping the origin server response source port to the front-end processor source port; and
- sending the remapped response to the client.

Foti, in an analogous field, teaches a method and a system for balancing a data load on a network comprising:

- receiving a request from a client (§ 0006 lines 1-7, § 0011 lines 1-8);
- determining a first source address from the request (§ 0006 lines 4-10, § 0011 lines 4-11);
- remapping the first source address of the request to a front-end processor source address (§ 0006 lines 10-14, § 0011 lines 11-15); and
- sending the remapped request to an origin server (§ 0006 lines 17-19, § 0012 lines 1-4).
- receiving a response from the origin server, wherein the response is responding to the remapped request and wherein the response is received in the front-end processor (§ 0007 lines 6-8);
- remapping the origin server response source address to the front-end processor source address (§ 0008 lines 3-6); and
- sending the remapped response to the client (§ 0007 lines 8-11, § 0014 lines 30-32).

Art Unit: 2153

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify said method of balancing a data load on a network as taught by Cohen by further including the steps of, and modifying said system for balancing a data load on a network by storing instructions on the storage facility coupled to the processor executable by the processor which configure the processing system to:

- remapping the origin server response source address to the front-end processor source address as taught by Foti; and
- sending the remapped response to the client as taught by Foti.

The motivation for doing so would have been to hide IP addresses between end users, the client and the origin server, because IP addresses can reveal location information and possibly identity (Foti ¶ 0005 lines 1-5). The method of balancing a data load on a network, as discussed above, does not expressly disclose the step of remapping the origin server response source port to the front-end processor source port. Examiner takes Official Notice (see MPEP § 2144.03) that remapping the origin server response source port to the front-end processor source port in a computer networking environment was well known in the art at the time the invention was made. The motivation for doing so would have been to assure that a client application that issues a response to said remapped response would not address the response to said remapped response to an invalid front-end processor port. At the time of invention it would have been obvious to a person of ordinary skill in the art to modify said method of balancing a data load on a network and said system for balancing a data load on a network by including the step of remapping the origin server response source port to the front-end

processor source port. Therefore, it would have been obvious to combine Cohen with Foti to obtain the invention as specified in claims 16 and 32. The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03, namely, "if applicant traverses such an assertion, the examiner should cite a reference in support of his or her position". However, MPEP § 2144.03 further states "See also *In re Bloom*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of a judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)."

Specifically, *In re Boon*, 169 USPQ 231, 234 states "as we held *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

40. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being obvious over Cohen in view of Wireless Session Protocol Specification (Approved Version 05-July-2001, Copyright 2001 Wireless Application Protocol Forum) hereinafter referred to as WSP Spec.

41. With respect to claim 9, Cohen teaches (claim 8) a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above. Cohen

Art Unit: 2153

does not disclose expressly (claim 9) said method wherein determining a first source address and a first source port from the request includes:

- receiving a WSP connect; and
- extracting a client ID from the WSP connect.

WSP Spec, in an analogous field, teaches a method of:

- receiving a WSP connect (p. 45 figures 1 and 2, p. 46 fig. 3); and
- extracting a client ID from the WSP connect (p. 23 section 6.3.3.1, Client Address (client ID) is a parameter of an S-Connect (WSP connect)).

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing a data load on a network as taught by Cohen by taking the following steps when determining a first source address and a first source port from the request as taught by WSP Spec:

- receiving a WSP connect; and
- extracting a client ID from the WSP connect.

The motivation for doing so would have been so that PDAs (Personal Digital Assistants) and mobile phones can be used as clients. Therefore, it would have been obvious to combine Cohen with WSP Spec to obtain the invention as specified in claim 9.

42. With respect to claim 10, Cohen teaches (claim 8) a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above. Cohen does not disclose expressly (claim 10) said method wherein determining a first source address and a first source port from the request includes:

- receiving a WSP resume; and

- extracting a client ID from the WSP resume.

WSP Spec, in an analogous field, teaches a method of:

- receiving a WSP resume (p. 47 figures 6 and 7); and
- extracting a client ID from the WSP resume (p. 28 section 6.3.3.4).

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing a data load on a network as taught by Cohen by taking the following steps when determining a first source address and a first source port from the request as taught by WSP Spec:

- receiving a WSP resume; and
- extracting a client ID from the WSP resume.

The motivation for doing so would have been so that PDAs (Personal Digital Assistants) and mobile phones can be used as clients. Therefore, it would have been obvious to combine Cohen with WSP Spec to obtain the invention as specified in claim 10.

43. Claims 11, 12, 29, and 30 are rejected under 35 U.S.C. 103(a) as being obvious over Cohen in view of Wireless Transport Layer Security Specification (Version 06-Apr-2001, Copyright 2001 Wireless Application Protocol Forum) hereinafter referred to as WTLS Spec, and WSP Spec.

44. With respect to claim 11, Cohen teaches a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above. Cohen does not disclose expressly (claim 11) said method wherein determining a first source address and a first source port from the request includes:

- receiving a abbreviated WTLS handshake;
- extracting a session ID from the abbreviated WTLS handshake; and
- determining the client ID from the session ID.

WTLS Spec, in an analogous field, teaches a method of determining a first source address and a first source port from a request including:

- receiving a abbreviated WTLS handshake (p. 52 last ¶ - p. 53 1st ¶ after fig. 6, fig. 6); and
- extracting a session ID from the abbreviated WTLS handshake (p. 61 (bottom table, ClientHello struct), p. 53 fig. 6).

WTLS Spec does not expressly teach a method of determining a first source address and a first source port from a request including:

- determining the client ID from the session ID.

WSP Spec, in an analogous field, teaches a method of determining a client ID from a session ID (p. 50 section 7.1.4.3, p. 50 section 7.1.5 1st ¶). At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing a data load on a network as taught by Cohen by taking the following steps when determining a first source address and a first source port from the request:

- receiving a abbreviated WTLS handshake as taught by WTLS Spec;
- extracting a session ID from the abbreviated WTLS handshake as taught by WTLS Spec; and
- determining the client ID from the session ID as taught by WSP Spec.

The motivation for doing so would have been to accommodate mobile clients that use the WAP communication protocol, such as PDAs and mobile phones, and provide them with a secure connection method (WTLS Spec (p. 19 section 6.3.1 1st ¶)). Therefore, it would have been obvious to combine Cohen with WTLS Spec and WSP Spec to obtain the invention as specified in claim 11.

45. With respect to claim 12, Cohen teaches a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above. Cohen does not disclose expressly (claim 12) said method wherein determining a first source address and a first source port from the request includes:

- receiving a full WTLS handshake;
- extracting a session ID from the full WTLS handshake; and
- determining the client ID from the session ID.

WTLS Spec, in an analogous field, teaches a method of determining a first source address and a first source port from a request including:

- receiving a full WTLS handshake (p. 51 last ¶ - fig. 5); and
- extracting a session ID from the abbreviated WTLS handshake (p. 61 (bottom table, ClientHello struct), p. 52 fig. 5).

WTLS Spec does not expressly teach a method of determining a first source address and a first source port from a request including:

- determining the client ID from the session ID.

WSP Spec, in an analogous field, teaches a method of determining a client ID from a session ID (p. 50 section 7.1.4.3, p. 50 section 7.1.5 1st ¶). At the time of invention it

would have been obvious to a person of ordinary skill in the art to modify the method of balancing a data load on a network as taught by Cohen by taking the following steps when determining a first source address and a first source port from the request:

- receiving a full WTLS handshake as taught by WTLS Spec;
- extracting a session ID from the full WTLS handshake as taught by WTLS Spec;
and
- determining the client ID from the session ID as taught by WSP Spec.

The motivation for doing so would have been to accommodate mobile clients that use the WAP communication protocol, such as PDAs and mobile phones, and provide them with a secure connection method (WTLS Spec (p. 19 section 6.3.1 1st ¶)). Therefore, it would have been obvious to combine Cohen with WTLS Spec and WSP Spec to obtain the invention as specified in claim 12.

46. With respect to claims 29 and 30, Cohen teaches a system for balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 28 above. Cohen does not expressly teach said system wherein the determine a first source address and a first source port from the request includes:

- receiving at least one of a group consisting of a WSP connect, a WSP resume, and a WTLS handshake.

WSP Spec, in an analogous field, teaches request protocols on a communication link including a WSP connect (p. 45 figures 1 and 2, p. 46 fig. 3) and a WSP resume (p. 47 figures 6 and 7). WTLS Spec, in an analogous field, teaches request protocols on a communication link including a WTLS handshake (p. 51-54 section 10.3). At the time of

invention it would have been obvious to a person of ordinary skill in the art to modify the system for balancing data load on a network as taught by Cohen by taking the following steps (claims 29 and 30) when determining a first source address and a first source port:

- receiving at least one of a group consisting of a WTLS handshake as taught by WTLS Spec, a WSP connect as taught by WSP Spec, and a WSP resume as taught by WSP Spec.

The motivation for doing so would have been to modify the system to accommodate clients that use the WAP communication protocol, such as PDAs and mobile phones, and provide them with a secure connection method (WTLS Spec (p. 19 section 6.3.1 1st ¶)). Therefore, it would have been obvious to combine Cohen with WTLS Spec and WSP Spec to obtain the invention as specified in claims 29 and 30.

47. Claim 14 is rejected under 35 U.S.C. 103(a) as being obvious over Cohen in view of How Network Address Translation Works (by Jeff Tyson, URL: <http://web.archive.org/web/20010209153957/www.howstuffworks.com/nat.htm>, 2/9/2004) hereinafter referred to as Tyson. Cohen teaches claims 8 and 13 as discussed in 35 USC § 102 rejections above. Cohen does not expressly teach the method of claim 13, wherein storing includes storing the corresponding source addresses and the corresponding source ports in a table. Tyson, in an analogous field, teaches a method for network address translation on a network comprising:

- (claim 8) receiving a request from a client (Overloading Example - bullet 4);

- (claim 8) remapping the first source address of the request to a front-end processor source address (Overloading Example – bullet 5 lines 2-4);
- (claim 8) remapping the first source port of the request to a front-end processor source port (Overloading Example – bullet 5 lines 4-7); and
- (claim 13) storing the first source address and the corresponding front-end processor source address (Overloading Example – bullet 5 lines 1-2); and
- (claim 13) storing the first source port and the corresponding front-end processor source port (Overloading Example – bullet 5 lines 1-2); and
- (claim 14) wherein storing includes storing the corresponding source addresses and the corresponding source ports in a table (Overloading Example – bullet 5 lines 1-2).

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing data load on a network as taught by Cohen by storing the corresponding source addresses and the corresponding source ports in a table as taught by Tyson. The motivation for doing so would have been so that the front-end processor can remap responses to their respective clients. Therefore, it would have been obvious to combine Cohen with Tyson to obtain the invention as specified in claim 14.

48. Claim 15 is rejected under 35 U.S.C. 103(a) as being obvious over Cohen in view of Verkler et al. (U.S. 5,850,517) hereinafter referred to as Verkler, WSP Spec, and WTLS Spec. Cohen teaches a method of balancing a data load on a network as

Art Unit: 2153

discussed in the 35 USC § 102 rejection of claim 8 above. Cohen does not expressly teach (claim 15) said method of balancing a data load on a network wherein:

- if the request includes at least one of a group consisting of a WSP connect, a WSP resume, and a WTLS handshake, then:
 - assigning the client to a selected agent of a plurality of agents, such that a data load is substantially balanced across the plurality of agents.

Verkler, in an analogous field, teaches a method of balancing a data load on a network wherein:

- if a request comes from a client on a mobile link (fig. 4 (205)) then:
 - assigning a client to a selected agent of a plurality of agents, such that a data load is substantially balanced across the plurality of agents (col. 8 lines 38-53).

Verkler does not expressly teach said request including at least one of a group consisting of a WSP connect, a WSP resume, and a WTLS handshake. WSP Spec, in an analogous field, teaches requests on a mobile communication link including a WSP connect (p. 45 figures 1 and 2, p. 46 fig. 3) and a WSP resume (p. 47 figures 6 and 7). WTLS Spec, in an analogous field, teaches a request on a mobile communication link consisting of a WTLS handshake (p. 51-54 section 10.3). At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing data load on a network as taught by Cohen by incorporating the following steps (claim 15):

- if the request includes at least one of a group consisting of a WSP connect as taught by WSP Spec, a WSP resume as taught by WSP Spec, and a WTLS handshake as taught by WTLS Spec, then:
 - assigning the client to a selected agent of a plurality of agents, such that a data load is substantially balanced across the plurality of agents as taught by Verkler.

The motivation for doing so would have been to accommodate mobile clients that use the WAP communication protocol, such as PDAs and mobile phones, and provide them with a secure connection method (WTLS Spec (p. 19 section 6.3.1 1st ¶)). Therefore, it would have been obvious to combine Cohen with Verkler, WSP Spec, and WTLS Spec to obtain the invention as specified in claim 15.

49. Claims 17, 18, 19, 33, 34, and 35 are rejected under 35 U.S.C. 103(a) as being obvious over Cohen in view of Verkler.

50. With respect to claim 17, Cohen teaches a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above. Cohen does not disclose expressly said method wherein remapping the first source address of the request to the front-end processor source address includes:

- remapping the first source address of the request to a selected agent source address wherein the selected agent is one of a plurality of agents; and

- wherein remapping the first source port of the request to the front-end processor source port includes remapping the first source port of the request to the selected agent source port.

Verkler, in an analogous field, teaches a method of balancing a data load on a network wherein requests are distributed to a selected agent wherein the selected agent is one of a plurality of agents (col. 8 lines 38-53). At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing a data load on a network taught by Cohen by including the following steps when remapping the first source address of the request to the front-end processor source address:

- remapping the first source address of the request to a selected agent source address, the selected agent being taught by Verkler, wherein the selected agent is one of a plurality of agents as taught by Verkler; and
- wherein remapping the first source port of the request to the front-end processor source port, as taught by Cohen, includes remapping the first source port of the request to the selected agent source port.

The motivation for selecting an agent from a plurality of agents, as taught by Verkler, would have been to perform automatic load balancing (Verkler col. 8 line 39). The motivation for remapping the first source address of the request to a selected agent source address and port would have been to identify the agent that is handling a connection and to translate the destination address and port number of a response to the address and port number of the client that originated the request (Cohen col. 8 lines

40-45). Therefore, it would have been obvious to combine Cohen with Verkler to obtain the invention as specified in claim 17.

51. With respect to claims 18 and 34, Cohen teaches a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above and a system of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 28 above. Cohen does not disclose expressly said method or said system wherein the network includes a wireless network. Verkler, in an analogous field, teaches a method and a system of balancing a data load on a network, wherein the network includes a wireless network (fig. 4 (205)). At the time of the invention it would have been obvious for a person of ordinary skill in the art to modify the method or system taught by Cohen by using a wireless network as taught by Verkler. The motivation for doing so would have been to accommodate mobile clients. Therefore, it would have been obvious to combine Cohen with Verkler to obtain the invention as specified in claims 18 and 34.

52. With respect to claims 19 and 35, Cohen teaches a method of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 8 above and a system of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 28 above. Cohen does not disclose expressly said method or said system wherein the client is a mobile user terminal. Verkler, in an analogous field, teaches a method and a system of balancing a data load on a network, wherein the client is a mobile user terminal (fig. 4 (201 and 204 (misnumbered - should also be 201))). At the time of the invention it would have been obvious for a person of ordinary

skill in the art to modify the method or system taught by Cohen by using a mobile link so that the client can be a mobile user terminal. The motivation for doing so would have been so that the client has enhanced freedom of mobility. Therefore, it would have been obvious to combine Cohen with Verkler to obtain the invention as specified in claims 19 and 35.

53. With respect to claim 33, Cohen teaches a system of balancing a data load on a network as discussed in the 35 USC § 102 rejection of claim 28 above. Cohen does not disclose expressly said system wherein the remap the first source address of the request to a front-end processor source address includes:

- remapping the first source address of the request to a selected agent source address wherein the selected agent is one of a plurality of agents; and
- wherein remapping the first source port of the request to the front-end processor source port includes remapping the first source port of the request to the selected agent source port.

Verkler, in an analogous field, teaches a system of balancing a data load on a network wherein requests are distributed to a selected agent wherein the selected agent is one of a plurality of agents (col. 8 lines 38-53). At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the method of balancing a data load on a network taught by Cohen by taking following steps when remapping the first source address of the request to the front-end processor source address:

- remapping the first source address of the request to a selected agent source address, the selected agent being taught by Verkler, wherein the selected agent is one of a plurality of agents as taught by Verkler; and
- wherein remapping the first source port of the request to the front-end processor source port, as taught by Cohen, includes remapping the first source port of the request to the selected agent source port.

The motivation for selecting an agent from a plurality of agents, as taught by Verkler, would have been to perform automatic load balancing (Verkler col. 8 line 39). The motivation for remapping the first source address of the request to a selected agent source address and port would have been to identify the agent that is handling a connection and to translate the destination address and port number of a response to the address and port number of the client that originated the request (Cohen col. 8 lines 40-45). Therefore, it would have been obvious to combine Cohen with Verkler to obtain the invention as specified in claim 33.

Conclusion

54. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- WAP Client ID Specification, Version 09-April-2001, Copyright 2001
Wireless Application Protocol Forum
- source port confusion (Damian Gerow, Newsgroup: mailing.unix.ipfilter, 10/25/2002, Url:

"http://groups.google.com/groups?selm=apbvkn%24gg0%241%40FreeBS
D.csie.NCTU.edu.tw&output=gplain")


- Network Working Group RFC 2663, 8/1999, URL:
"http://ietf.org/rfc/rfc2663.txt?number=2663"
- Templin et al. (U.S. 5,781,550)
- Brendel et al. (U.S. 5,774,660)
- Coile et al. (U.S. 6,061,349)

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip S. Scuderi who can be reached at (571) 272-5865. The examiner can normally be reached on Monday-Friday 8am-5pm.

56. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

57. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PSS



GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

